भारतीय मानक

Indian Standard

IS 18061 : 2023

औद्योगिक स्क्रीन के लिए एपर्चर आकार, प्रतिशत खुले क्षेत्र और तार व्यास संयोजन के चयन — दिशानिर्देश

Selection of Aperture Size, Percentage Open Area and Wire Diameter Combination for Industrial Screens — Guidelines

ICS 73.120

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Sieves, Sieving and Other Sizing Methods Sectional Committee, CED 55

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards after the draft finalized by the Sieves, Sieving and Other Sizing Methods Sectional Committee had been approved by the Civil Engineering Division Council.

Industrial screens can be manufactured in number of combinations of aperture size and shape of opening with respect to percentage open area to fulfill the requirement of the different activities in the different industries. This standard specifies the aperture size for industrial woven wire cloth screens, industrial wire screens, industrial perforated plate screens and industrial electroformed sheet screens. It also provides a comprehensive range of combination of aperture size and wire diameter with respect to their percentage open area for industrial wire cloth screens and industrial wire screens. The percentage open area of each aperture/wire combination is stated to assist in assessing a combination for screening purposes.

The nominal sizes of openings specified in this standard are taken from the R 10, R 20 and R 40 series of preferred numbers in accordance with IS 1076 (Part 1) : 1985/ISO 3 : 1973, 'Preferred numbers: Part 1 Series of preferred numbers (*second revision*)'.

The sizes within each series follow a geometric progression. Therefore, each size of a series differs from the successive size by a constant percentage. Apart from the omission of a few unusual values in the range of the very small sizes, the ratios of the successive sizes are as follows:

Series From IS 1076 (*Part 1*)	*Ratio*
R 10	1.25
R 20	1.12
R 40	1.06

In the formulation of this standard, due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. This has been met by deriving assistance from the following publications:

ISO 2194 : 1991	Industrial screens — Woven wire cloth, perforated plate and electroformed sheet — Designation and nominal sizes of openings
ISO 4783 (Part 1) : 1989	Industrial wire screens and woven wire cloth — Guide to the choice of aperture size and wire diameter combinations: Part 1 Generalities

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*).' The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SELECTION OF APERTURE SIZE, PERCENTAGE OPEN AREA AND WIRE DIAMETER COMBINATION FOR INDUSTRIAL SCREENS — GUIDELINES

1 SCOPE

This standard specifies the aperture size for industrial woven wire cloth screens, industrial wire screens, industrial perforated plate screens and industrial electroformed sheet screens. It also provides a comprehensive range of combinations of aperture size and wire diameter with respect to their percentage open area for industrial wire cloth screens and industrial wire screens. The percentage open area of each aperture/wire combination is stated to assist in assessing a combination for screening purposes.

2 REFERENCES

The standard given below contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard.

IS No.	*Title*
IS 5742 : 2022	Glossary of terms relating to industrial screen and screening (*first revision*)

3 DEFINITIONS

For the purposes of this Indian Standard, the definitions given in IS 5742 shall apply.

4 GENERAL

4.1 Three series of aperture sizes are specified in Tables 1 and 2. The R 10 ($R'10$) sizes shall be chosen by preference, otherwise the R 20 ($R'20$) sizes and, if necessary, the R 40 ($R'40$) sizes may be chosen. Aperture size of 1 mm and above shall be expressed in mm and sizes below 1 mm shall be expressed in µm.

NOTE — Attention is drawn to the fact that any two consecutive sizes of the R 40 series may overlap when the tolerances for apertures size are taken into account.

4.2 Aperture Size and Wire Diameter Combinations

For each width of aperture, Table 3 gives a number of associated diameters of wire and states the corresponding approximate percentage open area of the industrial woven wire cloth screen and industrial wire screen. Selections taken from this list may supply additional data, such as mass per unit area or mesh count per unit length. The open area may be calculated, as a percentage, from the formula.

$$A_o = 100\left(\frac{w}{w+d}\right)^2$$

where

A_o = open area, in percentage;
w = width of the aperture, in millimetres; and
d = diameter of the wire, in millimetres.

4.3 Mass per Unit Area

The mass per unit area, Q_A, of an industrial woven wire cloth screen and industrial wire screen is given, in kg/m^2, by the formula.

$$Q_A = \frac{d^2 Q f}{618.1\ (w+d)}$$

where

d = diameter of wire, in millimetres;
w = width of aperture, in millimetres;
Q = material density, in kilograms per cubic metre; and
f = wire screen conversion factor.

4.4 Mesh Count

The identification of an industrial woven wire cloth screen and industrial wire screen by the dimensions d and w (*see* Fig. 1) may be carried out by direct measurement of:

a) the wire diameter d with a micrometer; and
b) the aperture width w with inside vernier callipers.

The width of apertures which are too small to be measured by calipers may be calculated using the formula:

$$w = \frac{l}{n} - d$$

where

w = aperture width, in millimetres;
n = convenient number of apertures;
l = length covered by n apertures and n wires, in millimetres; and
d = wire diameter, in millimetres.

For aperture widths of 1 mm and greater, n shall be at least 10 and for smaller aperture widths at least 20. For these smaller apertures, the value for d shall be determined as an average value of at least five measurements.

The length l shall be measured with a steel rule or, in the case of very small apertures, a micrometer magnifying glass.

Example:

> A woven wire cloth which has a measured length of 36 mm covered by 10 apertures and 10 wires and a measured wire diameter of 0.45 mm, has an aperture width of
>
> $$w = \frac{36}{10} - 0.45 = 3.15 \text{ mm}$$

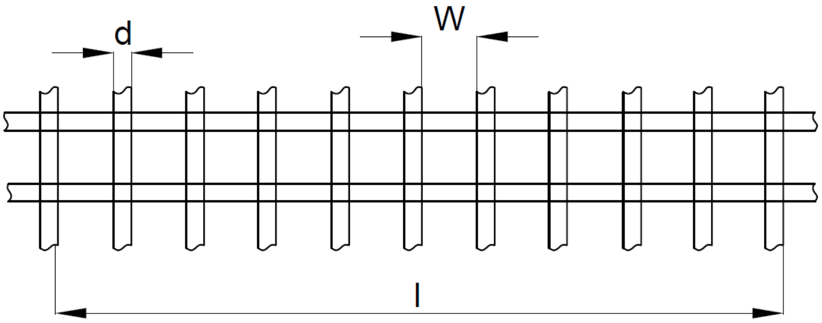

FIG. 1 MESH COUNT OF WIRE CLOTH

Table 1 Aperture Size – Millimetre Sizes

(*Clause* 4.1)

Principal Sizes	**Supplementary Sizes**	
R 10	R 20	R 40
125	125	125
		118
	112	112
		106
100	100	100
		95
	90	90
		85
80	80	80
		75
	71	71
		67
63	63	63
		60
	56	56
		53
50	50	50
		47.5
	45	45
		42.5
40	40	40
		37.5
	35.5	35.5
		33.5
31.5	31.5	31.5
		30
	28	28
		26.5
25	25	25
		23.6
	22.4	22.4
		21.2
20	20	20
		19
	18	18
		17
16	16	16
		15
	14	14
		13.2
12.5	12.5	12.5
		11.8
	11.2	11.2
		10.6
10	10	10
		9.5
	9	9
		8.5
8	8	8
		7.5
	7.1	7.1
		6.7
6.3	6.3	6.3
		6
	5.6	5.6
		5.3
5	5	5
		4.75
	4.5	4.5
		4.25
4	4	4
		3.75
	3.55	3.55
		3.35
3.15	3.15	3.15
		3
	2.8	2.8
		2.65
2.5	2.5	2.5
		2.36
	2.24	2.24
		2.12
2	2	2
		1.9
	1.8	1.8
		1.7
1.6	1.6	1.6
		1.5
	1.4	1.4
		1.32
1.25	1.25	1.25
		1.18
		1.12
		1.06
1	1	1

Table 2 Aperture Size – Micrometre Sizes

(*Clause* 4.1)

Principal Sizes	Supplementary Sizes	
R 10	R 20	R 40
		950
	900	900
		850
800	800	800
		750
	710	710
		670
630	630	630
		600
	560	560
		530
500	500	500
		475
	450	450
		425
400	400	400
		375
	355	355
		335
315	315	315
		300
	280	280
		265
250	250	250
		236
	224	224
		212
200	200	200
		190
	180	180
		170
160	160	160
		150
	140	140
		132
125	125	125
		118
	112	112
		106
100	100	100
		95
	90	90
		85
80	80	80
		75
	71	71
		67
63	63	63
		60
	56	56
		53
50	50	50
		48
	45	45
		42
40	40	40
		38
	36	36
		34
32	32	32
25	25	
20	20	
16		
10		
5		

Table 3 Aperture Size and Wire Diameter Combinations

(*Clause* 4.3)

Open Area A_o percent	**Width of Aperture,** w **in mm**																
	125				100				80				63				R 10
	125		112		100		90		80		71		63		56		R 20
	125	118	112	106	100	95	90	85	80	75	71	67	63	60	56	53	R 40
	Diameter of Wire, d **in mm**																A_o
86	10.0																86
85		10.0															85
84	11.2		10.0	10.0				8.00				6.30		5.60		5.00	84
83	12.5	11.2	11.2		10.0	9.00	9.00		8.00	7.10	7.10		6.30		5.60		83
82		12.5		11.2		10.00		9.00		8.00		7.10		6.30		5.60	82
81	14.0		12.5		11.2		10.0		9.00		8.00		7.10		6.30		81
80		14.0		12.5		11.2		10.0		9.00		8.00		7.10		6.30	80
79	16.0		14.0		12.5		11.2		10.0		9.00		8.00		7.10		79
78		16.0		14.0		12.5		11.2		10.0		9.00		8.00		7.10	78
77			16.0		14.0		12.5		11.2		10.0		9.00		8.00		77
76	18.0					14.0		12.5		11.2		10.0		9.00			76
75		18.0		16.0			14.0		12.5		11.2					8.00	75
74	20.0		18.0		16.0			14.0					10.0		9.00		74
73		20.0		18.0		16.0				12.5		11.2		10.0		9.00	73
72	22.4		20.0		18.0		16.0		14.0		12.5		11.2		10.0		72
71		22.4		20.0		18.0		16.0		14.0		12.5		11.2		10.0	71
70											14.0		12.5				70
69	25.0		22.4				18.0		16.0						11.2		69
68		25.0		22.4		20.0		18.0		16.0		14.0		12.5		11.2	68
67			25.0		22.4		20.0		18.0		16.0		14.0		12.5		67
66								20.0						14.0			66
65				25.0		22.4				18.0		16.0				12.5	65
64					25.0		22.4		20.0		18.0		16.0		14.0		64
63																14.0	63
62										20.0		18.0		16.0			62
61											20.0						61
60													18.0		16.0		60
59																16.0	59

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	50				40				31.5				25				R 10
	50		45		40		35.5		31.5		28		25		22.4		R 20
	50	47.5	45	42.5	40	37.5	35.5	33.5	31.5	30	28	26.5	25	23.6	22.4	21.2	R 40
	Diameter of Wire, d in mm																A_o
84				4.00				3.15		2.80		2.50				2.00	84
83	5.00	4.50			4.00	3.55	3.55		3.15		2.80		2.50	2.24	2.24		83
82		5.00		4.50		4.00		3.55		3.15		2.80		2.50		2.24	82
81	5.60		5.00		4.50		4.00		3.55		3.15		2.80		2.50		81
80		5.60		5.00		4.50		4.00		3.55		3.15		2.80		2.50	80
79	6.30		5.60		5.00		4.50		4.00		3.55		3.15		2.80		79
78		6.30		5.60		5.00		4.50		4.00		3.55		3.15		2.80	78
77	7.10		6.30		5.60		5.00		4.50		4.00		3.55		3.15		77
76		7.10		6.30		5.60		5.00		4.50				3.55		3.15	76
75			7.10		6.30		5.60					4.00			3.55		75
74	8.00								5.00		4.50		4.00				74
73		8.00		7.10		6.30		5.60		5.00		4.50		4.00		3.55	73
72	9.00		8.00		7.10		6.30		5.60		5.00		4.50		4.00		72
71		9.00		8.00		7.10		6.30		5.60		5.00		4.50		4.00	71
70																	70
69	10.0		9.00		8.00		7.10		6.30		5.60		5.00		4.50		69
68		10.0		9.00		8.00		7.10		6.30		5.60		5.00		4.50	68
67	11.2		10.0		9.00		8.00		7.10		6.30		5.60		5.00		67
66				10.0													66
65		11.2				9.00		8.00		7.10		6.30		5.60		5.00	65
64	12.5		11.2		10.0		9.00		8.00		7.10		6.30		5.60		64
63		12.5		11.2												5.60	63
62						10.0		9.00		8.00		7.10		6.30			62

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	50				40				31.5				25				R 10
	50		45		40		35.5		31.5		28		25		22.4		R 20
	50	47.5	45	42.5	40	37.5	35.5	33.5	31.5	30	28	26.5	25	23.6	22.4	21.2	R 40
	Diameter of Wire, d in mm																A_o
61	14.0		12.5		11.2		10.0						7.10		6.30		61
60		14.0		12.5					9.00		8.00						60
59						11.2		10.0		9.00		8.00		7.10		6.30	59
58			14.0		12.5		11.2		10.0						7.10		58
57	16.0										9.00		8.00				57
56						12.5		11.2		10.0		9.00		8.00		7.10	56
55							12.5										55
54									11.2		10.0		9.00		8.00		54
53												10.0				8.00	53
52														9.00			52
51													10.0		9.00		51

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	20				16				12.5				10				R 10
	20		18		16		14		12.5		11.2		10		9		R 20
	20	19	18	17	16	15	14	13.2	12.5	11.8	11.2	10.6	10	9.5	9	8.5	R 40
	Diameter of Wire, d in mm																A_o
84				1.60		1.40						1.00				0.800	84
83	2.00	1.80	1.80		1.60		1.40	1.25	1.25	1.12	1.12		1.00	0.900	0.900		83
82		2.00		1.80		1.60		1.40		1.25		1.12		1.00		0.900	82
81	2.24		2.00		1.80		1.60		1.40		1.25		1.12		1.00		81
80		2.24		2.00		1.80		1.60		1.40		1.25		1.12		1.00	80
79	2.50		2.24		2.00		1.80		1.60		1.40		1.25		1.12		79
78		2.50		2.24		2.00				1.60		1.40		1.25		1.12	78
77	2.80		2.50		2.24		2.00	1.80			1.60		1.40		1.25		77
76		2.80		2.50		2.24			1.80					1.40		1.25	76
75	3.15		2.80		2.50			2.00		1.80		1.60			14.0		75
74		3.15		2.80			2.24		2.00		1.80		1.60			1.40	74
73						2.50		2.24		2.00		1.80		1.60			73
72	3.55		3.15		2.80		2.50		2.24		2.00		1.80		1.60		72
71		3.55		3.15		2.80		2.50		2.24		2.00		1.80		1.60	71
70			3.55		3.15												70
69	4.00						2.80		2.50		2.24		2.00		1.80		69
68		4.00		3.55		3.15		2.80		2.50		2.24		2.00		1.80	68
67	4.50		4.00		3.55		3.15		2.80		2.50		2.24		2.00		67
66				4.00												2.00	66
65		4.50				3.55		3.15		2.80		2.50		2.24			65
64	5.00		4.50		4.00		3.55		3.15		2.80		2.50				64
63		5.00		4.50								2.80		2.50		2.24	63
62						4.00		3.55		3.15							62
61	5.60		5.00		4.50				3.55		3.15		2.80		2.50		61
60		5.60		5.00			4.00							2.80		2.50	60
59						4.50		4.00		3.55		3.15					59
58	6.30		5.60		5.00						3.55		3.15		2.80		58
57				5.60			4.50		4.00							2.80	57
56		6.30				5.00		4.50		4.00		3.55		3.15			56
55			6.30		5.60										3.15		55
54	7.10						5.00		4.50		4.00		3.55				54
53		7.10		6.30		5.60		5.00				4.00		3.55		3.15	53
52	8.00		7.10		6.30		5.60		5.00		4.50		4.00		3.55		51

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	20				16				12.5				10				R 10
	20		18		16		14		12.5		11.2		10		9		R 20
	20	19	18	17	16	15	14	13.2	12.5	11.8	11.2	10.6	10	9.5	9	8.5	R 40
	Diameter of Wire, d in mm																A_o
51		8.00		7.10		6.30								4.00		3.55	50
50								5.60		5.00		4.50					49
49			8.00		7.10		6.30		5.60		5.00		4.50		4.00		48
48																	47
47								6.30		5.60		5.00		4.50		4.00	46
46																	45
45									6.30		5.60		5.00		4.50		44
44														5.00		4.50	43
43																	42
42															5.00		41
41																5.00	40
40																	

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	8	-	-	-	6.3	-	-	-	5	-	-	-	4	-	-	-	R 10
	8	-	7.1	-	6.3	-	5.6	-	5	-	4.5	-	4	-	3.55	-	R 20
	8	7.5	7.1	6.7	6.3	6	5.6	5.3	5	4.75	4.5	4.25	4	3.75	3.55	3.35	R 40
	Diameter of Wire, d in mm																A_o
83	0.800	0.710	0.710	-	-	-	-	-	-	-	-	-	-	-	-	-	83
82	-	0.800	-	0.710	-	0.630	-	0.560	-	-	-	-	-	-	-	-	82
81	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	-	-	-	-	-	-	81
80	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	-	80
79	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	79
78	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	78
77	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	77
76	-	1.12		1.00	-	0.900	-	-	-	0.710	-	0.630	-	0560	-	0.500	76
75	1.25	-	1.12	-	-	-	-	0.800	-	-	0.710	-	0.630	-	0.560	-	75
74	-	-	-	-	1.00	-	0.900	-	0.800	-	-	-	-	-	-	-	74
73	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	73
72	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	72
71	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	71
70	-	-	1.40	-	1.25	-	-	-	-	-	-	-	-	-	-	-	70
69	1.60	-	-	-	-	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	69
68	-	1.60	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	68
67	1.80	-	1.60	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	67
66	-	-	-	-	-	1.40	-	-	-	-	-	1.00	-	-	-	-	66
65	-	1.80	-	1.60	-	-	-	1.25	-	1.12	-	-	-	0.900	-	0.800	65
64	2.00	-	1.80	-	1.60	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	64
63	-	-	-	-	-	-	-	1.40	-	1.25	-	1.12	-	-	-	-	63
62	-	2.00	-	1.80	-	1.60	-	-	-	-	-	-	-	1.00	-	0.900	62
61	2.24	-	2.00	-	-	-	-	-	1.40	-	1.25	-	1.12	-	1.00	-	61
60	-	-	-	-	1.80	-	1.60	-	-	1.40	-	1.25	-	-	-	-	60
59	-	2.24	-	2.00	-	1.80	-	1.60	-	-	-	-	-	1.12	-	1.00	59
58	2.50	-	2.24	-	2.00	-	-	-	-	-	1.40	-	1.25	-	1.12	-	58
57	-	-	-	-	-	-	1.80	-	1.60	-	-	-	-	1.25	-	1.12	57
56	-	2.50	-	2.24	-	2.00	-	1.80	-	1.60	-	-	-	1.25	-	1.12	56
55	2.80	-	2.50	-	-	-	-	-	-	-	-	-	1.40	-	1.25	-	55
54	-	-	-	-	2.24	-	2.00	-	1.80	-	1.60	-	-	-	-	-	54
53	-	2.80	-	2.50	-	2.24	-	2.00	-	1.80	-	1.60	-	1.40	-	1.25	53
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	8	-	-	-	6.3	-	-	-	5	-	-	-	4	-	-	-	R 10
	8	-	7.1	-	6.3	-	5.6	-	5	-	4.5	-	4	-	3.55	-	R 20
	8	7.5	7.1	6.7	6.3	6	5.6	5.3	5	4.75	4.5	4.25	4	3.75	3.55	3.35	R 40
	Diameter of Wire, d in mm																A_o
51	3.15	-	2.80	-	2.50	-	2.24	-	2.00	-	1.80	-	1.60	-	1.40	-	51
50	-	3.15	--	2.80	-	2.50	-	-	-	2.00	-	-	-	-	-	1.40	50
49	-	-		-	-	-	-	2.24	-	-	-	1.80	-	1.60	-	-	49
48	3.55	-	3.15	-	2.90	-	2.50	-	2.24	-	2.00	-	1.80	-	1.60	-	48
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
46	-	3.55	-	3.15	-	2.80	-	2.50	-	2.24	-	2.00	-	1.80	-	1.60	46
45	-	-	-	-	-	-	-	-	-	-	2.24	-	-	-	-	-	45
44	4.00	-	3.55	-	3.15	-	2.80	-	2.50	-	-	-	2.00	-	1.80	-	44
43	-	4.00	-	3.55	-	3.15	-	2.80	-	2.50	-	2.24	-	2.00	-	-	43
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.80	42
41	4.50	-	4.00	-	3.55	-	3.15	-	2.80	-	2.50	-	2.24	-	2.00	-	41
40	-	-	-	-	-	-	-	-	-	2.80	-	250	-	-	-	-	40
39	-	-	-	4.00	-	3.55	-	3.15	-	-	-	-	-	2.24	-	2.00	39
38	5.00	-	-	-	-	-	-	-	3.15	-	2.80	-	2.50	-	2.24	-	38
37	-	-	-	-	4.00	-	3.55	-	-	-	-	-	-	-	-	-	37
36	-	-	-	-	-	-	-	-	-	3.15	-	2.80	-	2.50	-	2.24	36
35	-	-	-	-	-	-	-	-	-	-	3.15	-	2.80	-	-	-	35
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50	-	34
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50	33

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	3.15	-	-	-	2.5	-	-	-	2	-	-	-	1.6	-	-	-	R 10
	3.15	-	2.8	-	2.5	-	2.24	-	2	-	1.8	-	1.6	-	1.4	-	R 20
	3.15	3	2.8	2.65	2.5	2.36	2.24	2.12	2	1.9	1.8	1.7	1.6	1.5	1.4	1.32	R 40
	Diameter of Wire, d in mm																A_o
78		0.400	-	0.355	-	-	-	-	-	-	-	-	-	-	-	-	78
77	0.450	-	0.400	-	0.355	-	-	-	-	-	-	-	-	-	-	-	77
76	-	0.450	-	-	-	0.355	-	0.315	-	0.280	-	-	-	-	-	-	76
75	-	-	-	0.400	-	-	0.355	-	0.315	-	0.280	-	-	-	-	-	75
74	0.500	-	0.450	-	0.400	-	-	-	-	0.315	-	0.280	-	-	-	-	74
73		0.500	-	0.450		0.400	-	0.355	-	-	-	-	-	0.250	-	0.224	73
72	0.560	-	0.500	-	0.450		0.400		0.355	-	0.315	-	0.280	-	0.250	-	72
71	-	0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	71
70	-	-	-	-	-	-	-	-	-	-	0.355	-	0.315	-	-	-	70
69	0.630	-	0.560	-	0.500	-	0.450	-	0.400	-	-	-	-	-	0.280	-	69
68	-	0.630		0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	68
67	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	67
66	-	-	-	-	-	-	-	-	-	-	-	0.400	-	-	-	-	66
65	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	-	-	0.355	-	0.315	65
64	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	64
63	-	-	-	-	-	-	-	0.560	-	0.500	-	0.450	-	-	-	-	63
62	-	0.800	-	0.710	-	0.630	-	-	-	-	-	-	-	0.400	-	0.355	62
61	-	-	-	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	-	-	61
60	0.900	-	0.800	-	-	-	-	-	-	0.560	-	0.500	-	-	0.400	-	60
59		0.900	-	0.800	-	0.710	-	0.630	-	-	-	-	-	0.450	-	0.400	59
58	1.00	-	-	-	-	-	0.710	-	0.630	-	0.560	-	0.500	-	-	-	58
57	-	-	0.900	-	0.800	-	-	-	-	-	-	0.560	-	-	0.450	-	57
56	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	-	-	0.500	-	0.450	56
55	-	-	-	-	-	-	-	-	-	-	0.630	-	0.560	-	-	-	55
54	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	-	-	-	-	0.500	-	54
53	-	1.12	-	1.00	-	-	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	53
52	-	-	-	-	-	0.900	-	-	-	-	-	-	-	-	-	-	52
51	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	51
50	-	1.25	-	-	-	-	-	-	-	0.800	-	0.710	-	0.630	-	-	50
49	-	-	-	1.12	-	1.00	-	0.900	-	-	-	-	-	-	-	0.560	49
48	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	48
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
46	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	46

Table 3 (*Continued*)

45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
44	1.60	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	44
43	-	1.60	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	-	43
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.710	42
41	-	-	-	-	1.40	-	1.25	-	1.12	-	1.00	-	0.900	-	-	-	41
40	1.80	-	1.60	-	-	-	-	1.25	-	1.12	-	1.00	-	-	0.800	-	40
39	-	1.80	-	1.60	-	1.40	-	-	-	-	-	-	-	0.900	-	0.800	39
38	-	-	-	-	-	-	1.40	-	1.25	-	1.12	-	1.00	-	-	-	38
37	2.00	-	1.80	-	1.60	-	-	-	-	-	-	-	-	-	0.900	-	37
36		2.00	-	-	-	1.60	-	1.40	-	1.25	-	1.12	-	1.00	--	-	36
35		-	-	1.80	-	-	-	-	1.40	-	1.25	-	1.12	-	-	0.900	35
34	2.24	-	-		1.80	-	1.60	-	-	-	-	-	-	-	1.00	-	34
33	-	2.24	-	2.00	-	-	-	-	-	1.40	-	1.25	-	1.12	-	-	33
32	-	-	-	-	-	1.80	-	1.60	-	-	1.40	-	1.25	-	-	1.00	32
31	2.50	-	2.24	-	2.00	-	1.80	-	1.60	-	-	-	-	-	1.12	-	31
30	-	-	-	-	-	-	-	-	-	-	-	1.40	-	1.25	-	-	30
29	-	-	-	-	-	2.00	-	1.80	-	1.60	-	-	-	-	-	1.12	29
28	-	-	-	-	-	-	2.00	-	1.80	-	1.60	-	1.40	-	1.25	-	28
27	-	-	-	-	-	-	-	-	-	-	-	1.60	-	1.40	-	-	27
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.25	26
25	-	-	-	-	-	-	-	-	-	-	-	-	1.60	-	1.40	-	25

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	1.25	-	-	-	1	-	-	-	0.8	-	-	-	0.63	-	-	-	R 10
	1.25	-	1.12	-	1	-	0.9	-	0.8	-	0.71	-	0.63	-	0.56	-	R 20
	1.25	1.18	1.12	1.06	1	0.95	0.9	0.85	0.8	0.75	0.71	0.67	0.63	0.6	0.56	0.53	R 40
	Diameter of Wire, d in mm																A_o
72	0.224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72
71	-	0.224	-	0.200	-	-	-	-	-	-	-	-	-	-	-	-	71
70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
69	0.250	-	0.224	-	0.200	-	-	-	-	-	-	-	-	-	-	-	69
68	-	0.250	-	0.224	-	0.200	-	0.180	-	-	-	-	-	-	-	-	68
67	0.280	-	0.250	-	0.224	-	0.200		0.180	-	-	-	-	-	-	-	67
66	-	-	-	0.250	-	-	-	0.200	-	-	-	-	-	-	-	-	66
65	-	0.280	-	-	-	0.224	-	-	-	0.180	-	0.160	-	-	-	-	65
64	0.315	-	0.280	-	0.250	-	0.224	-	0.200	-	0.180	-	0.160	-	-	-	64
63	-	-	-	0.280	-	0.250	-	0.224	-	-	-	-	-	-	-	0.140	63
62	-	0.315	-	-	-	-	-	-	-	0.200	-	0.180	-	0.160	-	-	62
61	0.355	-	0.315	-	0.280	-	0.250	-	0.224	-	0.200	-	-	-	-	-	61
60	-	-	-	-	-	0.280	-	0.250	-	-	-	-	0.180	-	0.160	-	60
59	-	0.355	-	0.315	-	-	-	-	-	0.224	-	0.200	-	0.180	-	0.160	59
58	-	-	0.355	-	0.315	-	0.280	-	0.250	-	0.224	-	0.200	-	-	-	58
57	0.400	-	-	-	-	-	-	0.280	-	-	-	-	-	-	0.180	-	57
56	-	0.400	-	0.355	-	0.315	-	-	-	0.250	-	0.224	-	0.200	-	0.180	56
55	-	-	-	-	-	-	0.315	-	0.280	-	0.250	-	-	-	-	-	55
54	0.450	-	0.400	-	0.355	-	-	-	-	-	-	-	0.224	-	0.200	-	54
53	-	-	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250		0.224	-	0.200	53
52	-	0.450	-	-	-	-	-	-	-	-	-	-		-	-	-	52
51	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	-	0.224	-	51
50	-	-	-	-	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	-	-	50
49	-	0.500	-	0.450	-	-	-	-	-	-	-	-	-	-	-	0.224	49
48	0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	-	48
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
46	-	0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	46
45	-	-	-	-	-	-	0.450	-	-	-	-	-	-	-	-	-	45
44	0.630	-	0.560	-	0.500	-	-	-	0.400	-	0.355	-	0.315	-	0.280	-	44
43	-	0.630		0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	43
42	-			-	-	-	-	-	-	-	-	-	-	-	-	-	42
41	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	41

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**															
	1.25	-	-	-	1	-	-	-	0.8	-	-	-	0.63	-	-	-	R 10
	1.25	-	1.12	-	1	-	0.9	-	0.8	-	0.71	-	0.63	-	0.56	-	R 20
	1.25	1.18	1.12	1.06	1	0.95	0.9	0.85	0.8	0.75	0.71	0.67	0.63	0.6	0.56	0.53	R 40
	Diameter of Wire, d in mm																A_o
40	-	-	--		-	0.560	-	0.500	-	-	-	-	-	-	-	-	40
39	-	0.710	-	0.630	-	-	-	-	-	0.450	-	0.400	-	0.355	-	0.315	39
38	-	-	-	-	0.630	-	0.560	-	0.500	-	-	-	-	-	-	-	38
37	0.800	-	0.710	-	-	-	-	-	-	-	0.450	-	0.400	-	0.355	-	37
36	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	0.400	-	0.355	36
35	-	-	-	-	-	-	0.630	-	0.560		-	-	-	-	-	-	35
34	0.900	-	0.800	-	0.710	-	-	-	-		0.500	-	0.450	-	0.400	-	34
33	-	-	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	0.450	-	-	33
32	-	0.900	-	-	-	-	-	-	-		-	-	-	-	-	-	32
31	1.00	-	0.900	-	0.800	-	0.710	-	0.630		0.560	-	0.500	-	0.450	-	31
30	-	-	-	-	-	-	-	0.710	-	0.630	-	0.560	-	0.500	-	-	30
29	-	1.00	-	0.900	-	0.800	-	-	-	-	-	-	-	-	-	0.450	29
28	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	0.500	-	28
27	-	-	-	-	-	-	-	0.800	-	-	-	0.630	-	0.560	-	-	27
26	-	1.12	-	1.00	-	0.900	-	-	-	0.710	-	-	-	-	-	0.500	26
25	1.25	-	1.12	-	1.00	-	0.900	-	0.800	-	0.710	-	0.630	-	0.560	-	25

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	0.5	-	-	-	0.4	-	-	-	0.315	-	-	-	0.25	-	-	-	R 10
	0.5	-	0.45	-	0.4	-	0.355	-	0.315	-	0.28	-	0.25	-	0.224	-	R 20
	0.5	0.475	0.45	0.425	0.4	0.375	0.355	0.335	0.315	0.3	0.28	0.265	0.25	0.236	0.224	0.212	R 40
	Diameter of Wire, d in mm																A_o
61	0.140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
60	-	0.140	-	0.125	-	-	-	-	-	-	-	-	-	-	-	-	60
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
58	-	-	0.140	-	0.125	-	-	-	-	-	-	-	-	-	-	-	58
57	0.160	-	-	0.140	-	-	-	-	-	-	-	-	-	-	-	-	57
56	-	0.160	-	-	-	0.125	-	0.112	-	-	-	-	-	-	-	-	56
55	-	-	0.160	-	0.140	-	0.125	-	-	-	-	-	-	-	-	-	55
54	0.180	-	-	-	-	-	-	-	0.112	-	0.100	-	0.090	-	-	-	54
53	-	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	0.100	-	-	-	0.080	53
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
51	0.200	-	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	0.100	-	0.090	-	51
50	-	0.200	-	-	-	-	-	0.140	-	-	-	-	-	-	-	-	50
49	-	-	-	0.180	-	0.160	-	-	-	-	-	0.112	-	0.100	-	0.090	49
48	0.224	-	0.200	-	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	0.100		48
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
46	-	0.224	-	0.200	-	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	0.100	46
45	-	-	0.224	-	-	-	-	-	-	-	-	-	-	-	-	-	45
44	0.250	-	-	-	0.200	-	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	44
43	-	0.250		0.224	-	0.200	-	-	-	0.160	-	0.140	-	0.125	-	0.112	43
42	-	-	-	-	-	-	-	0.180	-	-	-	-	-	-	-	-	42
41	0.280	-	0.250	-	0.224	-	0.200	-	-	-	-	-	0.140	-	0.125	-	41
40	-	0.280	-	0.250	-	-	-	-	0.180	-	0.160	-	-	-	-	0.125	40
39	-	-	-	-	-	0.224	-	0.200	-	0.180	-	0.160	-	0.140	-	-	39
38	0.315	-	0.280	-	0.250	-	0.224	-	-	-	-	-	-	-	0.140	-	38
37	-	-	-	-	-	-	-	-	0.200	-	0.180	-	0.160	-	-	-	37
36	-	0.315	-	0.280	-	0.250	-	0.224	-	0.200	-	-	-	0.160	-	0.140	36
35	-	-	0.315	-	0.280	-	-	-	0.224	-	0.200	0.180	-	-	-	-	35
34	0.355	-	-	-	-	-	0.250	-	-	-	-	-	0.180	-	0.160	-	34
33	-	0.355	-	0.315	-	0.280	-	0.250	-	0.224	-	-	-	-	-	-	33
32	-	-	-	-	-	-	-	-	-	-	-	0.200	-	0.180	-	0.160	32
31	0.400	-	0.355	-	0.315	-	0.280	-	0.250	-	0.224	-	0.200	-	0.180	-	31
30	-	-	-	0.355	-	0.315	-	0.280	-	0.250	-	-	-	-	-	-	30

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	0.5	-	-	-	0.4	-	-	-	0.315	-	-	-	0.25	-	-	-	R 10
	0.5	-	0.45	-	0.4	-	0.355	-	0.315	-	0.28	-	0.25	-	0.224	-	R 20
	0.5	0.475	0.45	0.425	0.4	0.375	0.355	0.335	0.315	0.3	0.28	0.265	0.25	0.236	0.224	0.212	R 40
	Diameter of Wire, d in mm																A_o
29	-	0.400	-	-		-	-	-	-	-	-	0.224	-	0.200	-	0.180	29
28	0.450	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	-	0.224	-	0.200	-	28
27	-	-	-	0.400	-	-	-	0.315	-	0.280	-	-	-	-	-	-	27
26	-	0.450	-	-	-	0.355	-	-	-	-	-	0.250	-	0.224	-	0.200	26
25	0.500	-	0.450	-	0.400	-	0.355	-	0.315	-	0.280	-	0.250	-	0.200	-	25

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture, w in mm**																
	0.2	-	-	-	0.16	-	-	-	0.125	-	-	-	0.1	-	-	-	R 10
	0.2	-	0.18	-	0.16	-	0.14	-	0.125	-	0.112	-	0.1	-	0.09	-	R 20
	0.2	0.19	0.18	0.17	0.16	0.15	0.14	0.132	0.125	0.118	0.112	0.106	0.1	0.095	0.09	0.085	R 40
	Diameter of Wire, d in mm																A_o
53	-	0.071	-	0.063	-	0.056	-	0.050	-	-	-	-	-	-	-	-	53
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
51	0.080	-	0.071	-	0.063	-	0.056	-	0.050	-	-	-	-	-	-	-	51
50	-	0.080	-	0.071	-	0.063	-	-	-	-	-	-	-	-	-	-	50
49	-	-	-	-	-	-	-	0.056	-	0.050	-	0.045	-	-	-	-	49
48	0.090	-	0.080	-	0.071	-	0.063	-	0.056	-	0.050	-	0.045	-	-	-	48
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
46	-	0.090	-	0.080	-	0.071	-	0.063	-	0.056	-	0.050	-	0.045	-	0.040	46
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
44	0.100	-	0.90	-	0.080	-	0.071	-	0.063	-	0.056	-	0.050	-	0.045	-	44
43	-	0.100	-	0.090	-	0.080	-	-	-	0.063	-	0.056	-	0.050	-	0.045	43
42	-	-	-	-	-	-	-	0.071	-	-		-	-	-	-	-	42
41	0.112	-	0.100	-	0.090	-	-	-	0.071	-	0.063	-	0.056	-	0.050	-	41
40	-	0.112	-	0.100	-	-	0.080	-	-	-	-	-	-	0.056	-	0.050	40
39	-	-	-	-	-	0.090	-	0.080	-	0.071	-	0.063	-	-	-	-	39
38	0.125	-	0.112	-	0.100	-	-	-	-	-	0.071	-	0.063	-	0.056	-	38
37	-	-	-	-	-	-	0.090	-	0.080	-	-	-	-	-	-	-	37
36	-	0.125	-	0.112	-	0.100	-	-	-	0.080	-	0.071	-	0.063	-	0.056	36
35	0.140	-	0.125	-	0.112	-	-	0.090	-	-	-	-	-	-	0.063	-	35
34	-	-	-	-	-	-	0.100	-	0.090	-	0.080	-	0.071	-	-	-	34
33	-	0.140	-	0.125	-	0.112	-	-	-	-	-	0.080	-	0.071	-	0.063	33
32	-	-	0.140	-	0.125	-	-	0.100	-	0.090	-	-	-	-	-	-	32
31	0.160	-	-	-	-	-	0.112	-	0.100	-	0.090	-	0.080	-	0.071	-	31
30	-	-	-	0.140	-	0.125	-	-	-	-	-	-	-	-	-	0.071	30
29	-	0.160	-	-	-	-	-	0.112	-	0.100	-	0.090	-	0.080	-	-	29
28	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	0.100	-	0.090	-	0.080	-	28
27	-	-	-	0.160	-	0.140	-	-	-	-	-	-	-	-	-	0.080	27
26	-	0.180	-	-	-	-	-	0.125	-	0.112	-	0.100	-	0.090	-	-	26
25	0.200	-	0.180	-	0.160	-	0.140	-	0.125	-	0.112	-	0.100	-	0.090	-	25

Table 3 (*Continued*)

Open Area A_o percent	**Width of Aperture**, w **in mm**																
	0.08	-	-	-	0.063	-	-	-	0.05	-	-	-	0.04	-	-	-	R 10
	0.08	-	0.071	-	0.063	-	0.056	-	0.05	-	0.045	-	0.04	-	0.036	-	R 20
	0.08	0.075	0.071	0.067	0.063	0.06	0.056	0.053	0.05	0.048	0.045	0.042	0.04	0.038	0.036	0.034	R 40
	Diameter of Wire, d **in mm**																A_o
46	-	0.036	-	0.032	-	-	-	-	-	-	-	-	-	-	-	-	46
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
44	0.040	-	0.036	-	0.032	0.030	-	-	-	-	-	-	-	-	-	-	44
43	-	0.040	-	-	-	0.032	-	0.028	-	-	-	-	-	-	-	-	43
42	-	-	-	0.036	-	-	0.030	-	-	-	-	-	-	-	-	-	42
41	0.045	-	0.040	-	0.036	-	0.032	0.030	0.028		-	-	-	-	-	-	41
40	-	-	-	-	-	-	-	-	-	0.028	-	-	-	-	-	-	40
39	-	0.045	-	0.040	-	0.036	-	0.032	0.030	-	-	0.025	-	-	-	-	39
38	0.050	-	0.045	-	-	-	-	-	-	0.030	0.028	-	0.025	-	-	-	38
37	-	-	-	-	0.040	-	0.036	-	0.032	-	-	-	-	-	-	-	37
36	-	0.050	-	0.045	-	0.040	-	-	-	0.032	0.030	0.028	-	0.025	-	-	36
35	0.056	-	-	-	-	-	-	0.036	-	-	-	-	0.028	-	0.025	-	35
34	-	-	0.050	-	0.045	-	0.040		0.036	-	0.032	0.030	-	-	-	-	34
33	-	0.056	-	0.050	-	0.045	-	--	-	0.036	-	-	0.030	0.028	-	0.025	33
32	-	-	-	-	-	-	-	0.040	-	-	-	0.032	-	-	0.028	-	32
31	0.063	-	0.056	-	0.050	-	0.045	-	0.040	-	0.036	-	0.032	0.030	-	-	31
30	-	0.063	-	0.056	-	0.050	-	-	-	0.040	-	-	-	-	0.030	0.028	30
29	-	-	-	-	-	-	-	0.045	-	-	-	0.036	-	0.032	-	-	29
28	0.071	-	0.063	-	0.056	-	0.050	-	0.045	-	0.040	-	0.036	-	0.032	0.030	28
27	-	-	-	0.063	-	0.056	-	-	-	0.045	-	-	-	-	-	0.032	27
26	-	0.071	-	-	-	-	-	0.050	-	-	-	0.040	-	0.036	-	-	26
25	0.080	-	0.071	-	0.063	-	0.056	-	0.050	-	0.045	-	0.040	-	0.036	-	25

Table 3 (*Concluded*)

Open Area A_o percent	**Width of Aperture, w in mm**									
	0.032	-	-	-	0.025	-	-	-	0.020	R 10
	0.032	-	0.028	-	0.025	-	0.022	-	0.020	R 20
	0.032	0.03	0.028	0.026	0.025	0.024	0.022	0.021	0.020	R 40
	Diameter of Wire, d in mm									A_o
33	-	0.022	-	-	-	-	-	-	-	33
32	0.025	-	-	-	-	-	-	-	-	32
31	-	-	0.022	-	-	-	-	-	-	31
30	-	0.025	-	-	-	-	-	-	-	30
29	-	-	-	-	-	-	-	-	-	29
28	0.028	-	0.025	0.022	0.022	-	-	-	-	28
27	0.030	0.028	-	-	-	0.022	-	-	-	27
26	-	-	-	0.025	-	-	-	0.020	-	26
25	0.032	-	0.028	-	0.025	-	0.022	-	0.020	25

ANNEX C

(*Foreword*)

COMMITTEE COMPOSITION

Sieves, Sieving and Other Sizing Methods Sectional Committee, CED 55

Organization	*Representative(s)*
In Personal Capacity (*90, Savita Vihar, Vikas Marg, Delhi - 110092*)	Dr R. P. Singhal **(*Chairperson*)**
AIMIL Limited, New Delhi	Shri Rohitash Barua Shri Madan Kumar Sharma (*Alternate*)
Associated Soapstone Distributing Co Pvt Ltd, Jaipur	Shri Vikram Golcha Shri Dilip Jha (*Alternate*)
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Haver Standard India Pvt Limited, Mumbai	Shri Deven H. Shah Shri Vikram D. Shah (*Alternate*)
Indian Bureau of Mines, Nagpur	Shri M. G. Raut Shri V. A. Sontakkey (*Alternate*)
Indian Institute of Technology, Delhi	Representative
Industrial Wire Netting Company, New Delhi	Shri Keshav Gupta Shri Sanjay Gupta (*Alternate*)
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In Personal Capacity (*Indian Institute of Technology, Hauz Khas, New Delhi - 110016*)	PROF B. PITCHUMANI
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